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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/363,642	07/30/1999	TOSHIHITO KIDO	024060	8372
21839	7590	11/04/2004	EXAMINER	
BURNS DOANE SWECKER & MATHIS L L P			VILLECCO, JOHN M	
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ALEXANDRIA, VA 22313-1404			ART UNIT	PAPER NUMBER
			2612	

DATE MAILED: 11/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/363,642

Applicant(s)

KIDO ET AL.

Examiner

John M. Villecco

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-16,18-22,24,25,27,28 and 30 is/are rejected.
- 7) ☒ Claim(s) 1,4,17,23,26 and 29 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see page 10, filed June 14, 2004, with respect to the rejection(s) of claim(s) 6-16 and 18-22 under Sato (U.S. Patent No. 6,167,208) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newly reconsidered art.
2. Applicant's arguments with regard to the Arai patent (U.S. Patent No. 6,130,717) filed June 14, 2004 have been fully considered but they are not persuasive. Generally regarding the Arai patent, the applicant argues that Arai fails to specifically disclose "a power supply controller for selectively controlling power supply in the main camera body in accordance with a result of the detection" where the detection is of a "condition of proper connection of said image sensing unit to said camera body. However, as will be discussed in the rejection presented below, Arai discloses the ability to detect whether or not the interchangeable lens is properly attached. When it is determined that the lens is not attached correctly or not attached at all, certain parts of the camera are disable in order to conserve energy. See column 8, lines 40-64. Thus, a "proper" connection is interpreted to be whether or not the interchangeable lens is properly attached. When used in conjunction with Ikeda's teach of detecting if an image sensing head is connected, it would have been obvious to one of ordinary skill in the art to disable certain parts of the camera if it is detected that the image sensing head is not properly attached.
3. This **action is non-final** due to the new grounds of rejection presented below. The examiner apologizes for the delay in prosecution.

Claim Objections

4. Claim 1 is objected to because of the following informalities:

- In line 10 of claim 1, applicant recites the phrase “unit to of said camera body”.

This appears to be a typographical error and that the applicant meant to use the phrase – unit to said camera body –.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suemoto et al. (U.S. Patent No. 5,844,606) in view of Juen (U.S. Publ. No. 2002/0054233).**

7. Regarding *claim 30*, Suemoto discloses a camera (10) that is connectable to a plurality of external devices. The camera includes a camera signal processor (20) for performing processing on image data from an image sensing unit, which is interpreted to be the CCD (18) and the lens (18). The camera also includes a multi-connector (11) for recognizing the type of device that is connected to the camera (10). See column 4, line 63 to column 5, line 35. Various devices can be attached to the camera body (10) including an LCD monitor (300), a zoom camera (90), and a station (30). When these devices are attached the camera acts in a certain way to supplement the

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operation of the attached device. For instance, when the zoom camera (90) is attached, the camera (10) acts as a video tape recorder.

Suemoto, however, fails to explicitly disclose that the camera includes a power supply controller for supplying power based upon the recognition of the interface type. Juen, on the other hand, discloses that it is well known in the art to provide power to only certain parts of a camera that are in use. More specifically, Juen discloses a camera that includes a power source control means (22) for controlling when power should be supplied to specific portions of the camera. When the user selects certain windows to open on a display, power is supplied to the various camera portions associated with the windows. See paragraphs 0039 to 0042. This allows for camera portions not being used to be cut off from the power supply, thus saving power and conserving energy. One of ordinary skill in the art at the time the invention was made would have found it obvious to disable certain portions of the camera body within Suemoto, if they are not being used. For instance with the zoom camera (90) is attached to the interface (11), the CCD (19) could be disabled. And when the marine package (70) is attached, the power to the internal microphone (22) should be disabled since it is not in use. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to disable portions of the camera body that are not in use, based upon the recognition of the device attached to the interface, so that power supply is conserved.

8. **Claims 1, 5-14, 18-22, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeda et al. (U.S. Patent No. 6,046,769) in view of Arai et al. (U.S. Patent No. 6,130,717).**

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9. Regarding **claim 1**, Ikeda discloses a camera consisting of an image sensing unit (100) that includes a taking lens (101) and a CCD (103). The camera further includes a camera body (140) that includes an image processor (152). Additionally, the camera includes a signal processor controller (164), which acts as the detector for detecting a condition of connection of the image sensing unit (col. 12, lines 25-34).

Ikeda, however, fails to specifically disclose a power supply controller for selectively controlling power supply in the camera body in accordance with the detection. Arai, on the other hand, discloses an interchangeable lens system that detects a connection condition of the interchangeable lens and based upon the connection condition will control the power supply within the camera body. More specifically, Arai discloses the ability to detect whether or not the interchangeable lens is properly attached. When it is determined that the lens is not attached correctly or not attached at all, certain parts of the camera are disabled in order to conserve energy. See column 8, lines 40-64. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to control the power supply in the camera body of Ikeda based on a condition of connection of the interface so that wasteful power consumption is avoided and battery power for photographing time is not shortened.

10. Regarding **claim 5**, Ikeda discloses the use of memory (156) to record the electric signal as image data.

11. With regard to **claim 6**, Ikeda discloses a camera consisting of an image sensing unit (100) that includes a taking lens (101) and a CCD (103). The image sensing unit is connectable to the camera body (140) through the connector (150). The camera further includes a camera body (140) that includes an image processor (152). In this case the camera body is interpreted to

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be the digital camera. Additionally, the camera includes a signal processor controller (164), which acts as the detector for detecting a condition of connection of the image sensing unit. The signal processor sends a signal to the image sensor controller (110) in order to determine the type of device connected to the interface (col. 12, lines 25-34).

Ikeda, however, fails to specifically disclose a power supply controller for selectively controlling power supply in the camera body in accordance with the detection. Arai, on the other hand, discloses an interchangeable lens system that detects a connection condition of the interchangeable lens and based upon the connection condition will control the power supply within the camera body. More specifically, Arai discloses the ability to detect whether or not the interchangeable lens is properly attached. When it is determined that the lens is not attached correctly or not attached at all, certain parts of the camera are disable in order to conserve energy. See column 8, lines 40-64. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to control the power supply in the camera body of Ikeda based on a condition of connection to the interface so that wasteful power consumption is avoided and battery power for photographing time is not shortened.

12. As for **claim 7**, Arai discloses that if the detachable switch (35) detects that the lens unit is not attached (i.e. the lens unit is not attached to the interface), the power supply voltages from the battery (37) are prohibited. See column 8, line 41 to column 9, line 10.

13. With regard to **claim 8**, as mentioned above, Arai discloses that it is well known in the art to supply power to an interface. Power from the camera unit (CU) is supplied to the lens unit (LU) in order to drive the lens unit. Inherently, Arai would include a power supply portion for getting the power to the different parts of the camera. Therefore, when the lens is disconnected

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from the camera body, power would not be supplied to the lens unit since when the lens unit is detached power is cut off to each of the different parts of the camera.

14. Regarding *claim 9*, inherently the different parts of the camera would each have individual power supply portions in order for the supplied power to be provided to each of the circuits. The power supply portions would take the form of wiring. Therefore, when the lens is disconnected from the camera body, power would not be supplied to the lens unit since when the lens unit is detached power is cut off to each of the different parts of the camera. The same concept goes for each of the different parts of the camera body that do not receive power.

15. As for *claim 10*, Ikeda discloses the use of memory (156) to record the electric signal as image data.

16. With regard to *claim 11*, Ikeda discloses a camera consisting of an image sensing unit (100) that includes a taking lens (101) and a CCD (103). The image sensing unit is connectable to the camera body (140) through the connector (150). The camera further includes a camera body (140) that includes an image processor (152). In this case the camera body is interpreted to be the digital camera. Additionally, the camera includes a signal processor controller (164), which acts as the detector for detecting a condition of connection of the image sensing unit. The signal processor sends a signal to the image sensor controller (110) in order to determine the type of device connected to the interface (col. 12, lines 25-34). Therefore, a number of different types of units are attachable to the camera body.

Ikeda, however, fails to specifically disclose a power supply controller for selectively controlling power supply in the camera body in accordance with the detection. Arai, on the other hand, discloses an interchangeable lens system that detects a connection condition of the

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interchangeable lens and based upon the connection condition will control the power supply within the camera body. More specifically, Arai discloses the ability to detect whether or not the interchangeable lens is properly attached. When it is determined that the lens is not attached correctly or not attached at all, certain parts of the camera are disable in order to conserve energy. See column 8, lines 40-64. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to control the power supply in the camera body of Ikeda based on condition of connection of the interface so that wasteful power consumption is avoided and battery power for photographing time is not shortened.

17. With regard to *claim 12*, Arai discloses that if the detachable switch (35) detects that the lens unit is not attached (i.e. the lens unit is not attached to the interface), the power supply voltages from the battery (37) are prohibited. See column 8, line 41 to column 9, line 10.

18. As for *claim 13*, as mentioned above, Arai discloses that it is well known in the art to supply power to an interface. Power from the camera unit (CU) is supplied to the lens unit (LU) in order to drive the lens unit. Inherently, Arai would include a power supply portion for getting the power to the different parts of the camera. Therefore, when the lens is disconnected from the camera body, power would not be supplied to the lens unit since when the lens unit is detached power is cut off to each of the different parts of the camera.

19. Regarding *claim 14*, inherently the different parts of the camera would each have individual power supply portions in order for the supplied power to be provided to each of the circuits. The power supply portions would take the form of wiring. Therefore, when the lens is disconnected from the camera body, power would not be supplied to the lens unit since when the

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lens unit is detached power is cut off to each of the different parts of the camera. The same concept goes for each of the different parts of the camera body that do not receive power.

20. With regard to *claim 18*, Ikeda discloses the use of memory (156) to record the electric signal as image data.

21. As for *claim 19*, Ikeda discloses a camera consisting of an image sensing unit (100) that includes a taking lens (101) and a CCD (103). The image sensing unit is connectable to the camera body (140) through the connector (150). The camera further includes a camera body (140) that includes an image processor (152). Additionally, the camera includes a signal processor controller (164), which acts as the detector for detecting a condition of connection of the image sensing unit. The signal processor sends a signal to the image sensor controller (110) in order to determine the type of device connected to the interface (col. 12, lines 25-34).

Therefore, a number of different types of units are attachable to the camera body.

Ikeda, however, fails to specifically disclose a power supply controller for selectively controlling power supply in the camera body in accordance with the detection. Arai, on the other hand, discloses an interchangeable lens system that detects a connection condition of the interchangeable lens and based upon the connection condition will control the power supply within the camera body. More specifically, Arai discloses the ability to detect whether or not the interchangeable lens is properly attached. When it is determined that the lens is not attached correctly or not attached at all, certain parts of the camera are disable in order to conserve energy. See column 8, lines 40-64. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to control the power supply in the camera body

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of Ikeda based on condition of connection to the interface so that wasteful power consumption is avoided and battery power for photographing time is not shortened.

22. With regard to **claim 20**, Arai discloses that if the detachable switch (35) detects that the lens unit is not attached (i.e. the lens unit is not attached to the interface), the power supply voltages from the battery (37) are prohibited. See column 8, line 41 to column 9, line 10.

23. As for **claim 21**, Ikeda discloses that when it is determined that a different image sensing unit is attached the signal processing controller (164) acquires ID information from the newly attached image sensing unit. See column 12, lines 25-34.

24. Regarding **claim 22**, Ikeda discloses a camera consisting of an image sensing unit (100) that includes a taking lens (101) and a CCD (103). The image sensing unit is connectable to the camera body (140) through the connector (150). The camera further includes a camera body (140) that includes an image processor (152). In this case the camera body is interpreted to be the digital camera. Additionally, the camera includes a signal processor controller (164), which acts as the detector for detecting a condition of connection of the image sensing unit. The signal processor sends a signal to the image sensor controller (110) in order to determine the type of device connected to the interface (col. 12, lines 25-34). A number of different types of units are attachable to the camera body. A different image sensing unit would be the different detachably connectable device

Ikeda, however, fails to specifically disclose a power supply controller for selectively controlling power supply in the camera body in accordance with the detection. Arai, on the other hand, discloses an interchangeable lens system that detects a connection condition of the interchangeable lens and based upon the connection condition will control the power supply

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within the camera body. More specifically, Arai discloses the ability to detect whether or not the interchangeable lens is properly attached. When it is determined that the lens is not attached correctly or not attached at all, certain parts of the camera are disable in order to conserve energy. See column 8, lines 40-64. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to control the power supply in the camera body of Ikeda based on condition of connection of the interface so that wasteful power consumption is avoided and battery power for photographing time is not shortened.

25. As for *claim 27*, Ikeda discloses the use of memory (156) to record the electric signal as image data.

26. **Claims 2, 3, 15, 16, 24, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeda et al. (U.S. Patent No. 6,046,769) in view of Arai et al. (U.S. Patent No. 6,130,717) and further in view of Kido (Japanese Publ. No. 10-079874).**

27. Regarding *claim 2*, as mentioned above in the discussion of claim 1, both Ikeda and Arai disclose all of the limitations of the parent claim. However, neither of the aforementioned references discloses a flash control circuit in the camera body. Kido, on the other hand, discloses that it is well known in the art to provide a flash control circuit in the body of a camera. Kido discloses that the camera body (2) includes a flash control circuit (ref. no. 214, paragraph 0076). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a flash controller in the camera body of Ikeda so that images with proper lighting can be captured.

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28. As for *claim 3*, although Arai does not specifically disclose controlling power supply to a flash control circuit it would have been obvious to one of ordinary skill in the art to inhibit the flash from working in Ikeda if the lens unit was not attached properly, since the lens unit and image sensor would not be able to capture an image if it were not connected to the camera body. By doing this, the power supply can be conserved since needless power is not being sent to the flash.

29. *Claims 15 and 24* are considered substantively equivalent to claim 2. Please see the discussion of claim 2 above.

30. *Claims 16 and 25* are considered substantively equivalent to claim 3. Please see the discussion of claim 3 above.

31. **Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeda et al. (U.S. Patent No. 6,046,769) in view of Arai et al. (U.S. Patent No. 6,130,717) and further in view of Yamamoto (U.S. Patent No. 5,895,127).**

32. Regarding *claim 28*, as mentioned above in the discussion of claim 22, both Ikeda and Arai disclose all of the limitations of the parent claim. However, neither Ikeda nor Arai disclose that the different detachably connectable device is one or an extension cable, a personal computer, or a video capture adapter. Yamamoto, on the other hand discloses that it is well known in the art to replace an interchangeable lens with a personal computer interface. More specifically, the lens mount (90) can either have the optical system (12) of the interface unit (90) attached to it. The interface unit is used to send image data to a personal computer. See column 3, lines 1-9. Therefore, it would have been obvious to one of ordinary skill in the art at the time

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the invention was made to connect a personal computer interface in place of the image sensing unit in Ikeda so that images can be transferred out of the camera to a personal computer without using different interfaces for each.

Allowable Subject Matter

33. Claims 4, 17, 23, 26, and 29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

34. Regarding *claims 4, 17, and 26*, the primary reason for indication of allowable subject matter is that the prior art fails to teach or reasonably suggest that when image sensing unit is connect by way of a cable and the cable has a length longer than a predetermined length, the power supply controller does not supply power to the flash control circuit.

35. As for *claims 23 and 29*, the primary reason for indication of allowable subject matter is that the prior art fails to teach or reasonably suggest selectively supplying power to portions of the camera and not to other portions of the camera, the selection being based on the detected type of device.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9306 (For either formal or informal communications intended for entry. For informal or draft communications, please label **"PROPOSED"** or **"DRAFT"**)

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Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington VA, Sixth Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John M. Villecco whose telephone number is (703) 305-1460.

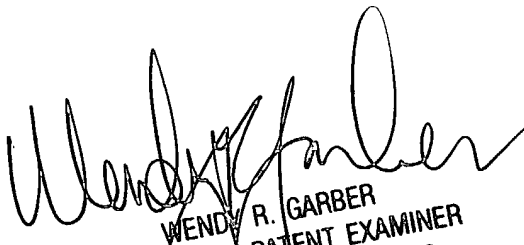
The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on (703) 305-4929. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



John M. Villecco
November 1, 2004



WENDY R. GARBER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600